

TWO NEW LEAFHOPPER GENERA, *DIRENAIA* AND *XANIONA*  
(HEMIPTERA: CICADELLIDAE: TYPHLOCYBINAЕ: TYPHLOCYBINI)  
FROM CHINA

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*Abstract.*—The following new taxa are described from China: *Direnaia*, n. gen., with one new species, *D. quadripunctata*, n. sp. and *Xaniona*, n. gen., with two new species, *Xaniona galacta*, n. sp. (type species) and *X. cerina*, n. sp.

*Key Words:* Auchenorrhyncha, Cicadellidae, Typhlocybinae, Typhlocybini, *Direnaia*, *Xaniona*, new genus, new species, China

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The Typhlocybini from China were reviewed by Zhang (1990) with additional studies by Dworakowska (1970, 1980, 1982). This paper deals with two new typhlocybine genera of this tribe from China. Three new species are described and illustrated: *Direnaia quadripunctata*, *Xaniona galacta* (type species of *Xaniona*), and *X. cerina*.

All type specimens are deposited in the collections of the Entomological Museum, Northwest Sci-Tech University of Agriculture and Forestry, Yangling, China.

*Direnaia* Zhang and Huang, new genus

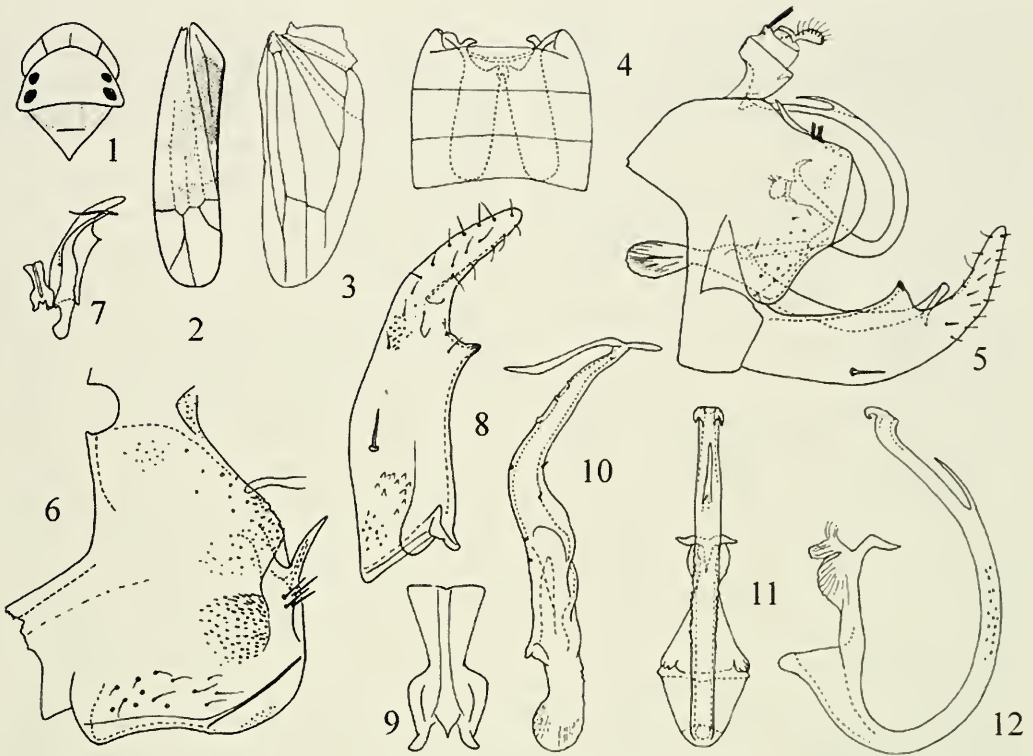
Type species.—*Direnaia quadripunctata*, n. sp.

Diagnosis.—The new genus belongs to the *Typhlocyba* complex and is distinguished from the similar *Agnesiella* Dworakowska by 1) the light body color, yellowish to yellowish white; 2) basal half of subgenital plate broadened; 3) gracile macrosetae absent at apical part of subgenital

plate; and 4) aedeagus without apical ventral ledge.

Description.—Yellowish white with irregular yellowish patches on vertex and pronotum; forewing with indistinct fuscous pattern. Head slightly narrower than pronotum; vertex rounded to face, fore and hind margins subparallel, coronal suture visible. Forewing rather long, first apical cell small, second apical cell largest, widening towards apex, third apical cell petiolate and subtriangular, stem short. Hind wing with veins R and M confluent apically; apical submarginal vein absent. Abdominal apodemes well developed.

Posterior part of pygofer side covered with minute teeth at top and middle and an oblique ledge bridging ventral and dorsal margins; setosity consisting of some rigid microsetae at posterior margin and feeble microsetae scattered at ventral part. Subgenital plate extending well beyond posterior margin of pygofer with basal half broadened and sculptured, and with a stout subbasal macroseta near inner side and a



Figs. 1–28. 1–12, *Direnaia quadripunctata*. 1, Head and thorax, dorsal view. 2, Forewing. 3, Hindwing. 4, Abdominal apodeme. 5, Male genital capsule and anal tube, lateral view. 6, Male pygofer side, lateral view. 7, Paramere, connective and subgenital plate, dorsal view. 8, Subgenital plate, ventral view. 9, Connective. 10, Paramere. 11, Aedeagus, posterior view. 12, Aedeagus, lateral view.

protrusion at middle of outer margin; apical half narrow with sparse short microsetae roughly in rows. Paramere long with broad base, distal part narrowing to apex with two apical processes, a row of sensorial pits at inner margin and several scattered short and rigid microsetae. Connective stem broad basally with a longitudinal lamellate dorsal ledge medially. Aedeagus with indistinct preatrium and well-developed dorsal apodeme; shaft elongate, tubular with apical gonopore, a single dorsal process at apex and subapical posterior process.

**Etymology.**—The new genus name is a combination of “Dr. Irena” to honor Dr. Irena Dworakowska’s contribution to the knowledge of the Chinese fauna of Typhlocybinae. The gender is feminine.

### *Direnaia quadripunctata* Zhang and Huang, new species

(Figs. 1–12)

**Description.**—Length: ♂ 3.84 mm; ♀ 3.60 mm. Vertex and pronotum yellowish white with irregular yellowish patches; pair of blackish spots on each side of pronotum. Face and scutellum yellowish. Forewing usually with pale fuscous patches on clavus and at end of corium. Abdominal apodemes reaching to end of abdominal sternite V. Pygofer side with long digitate process near dorsocaudal corner, directed dorsad; several rigid microsetae below process. Paramere with one long sinuate process directed medially and another short straight process directed laterally. Aedeagus with apex of dorsal apodeme extending laterally on each

side; shaft evenly curved dorsally in lateral view, similar width throughout length basally, slightly narrower distally, a straight posterior process at apical  $\frac{1}{3}$ , directed towards apex.

Types.—Holotype: ♂, China, Mt. Emei (29.6°N, 103.4°E), Sichuan Province, alt. 1,600 m, on *Rubus*, Nov. 1, 1999, coll. I. Dworakowska. Paratypes: China, 1 ♂, 2 ♀, Mt. Gongga (29.7°N, 101.9°E), Sichuan Province, alt. 2,650 m, Nov. 5, 1999; 1 ♂, Lijiang (26.9°N, 100.3°E), Xinzhu, Yunnan Province, alt. 2,300 m, Nov. 15, 1999; 1 ♀, Lijiang (26.9°N, 100.3°E), Xinzhu, Yunnan Province, on *Juglans*, Nov. 14, 1999; 2 ♀, Tengchong (25.1°N, 98.5°E), Yunnan Province, alt. 2,000 m, on *Pinus*, *Rosa* and *Quercus*, Nov. 24, 1999; 1 ♀, Tengchong (25.1°N, 98.5°E), Yunnan Province, alt. 1,700 m, Nov. 22, 1999; all collected by I. Dworakowska.

Etymology.—The specific name is derived from the Latin words “*quadri*” and “*punctata*” referring to the four spots on the pronotum.

#### *Xaniona* Zhang and Huang, new genus

Type species.—*Xaniona galacta*, n. sp.

Diagnosis.—The new genus belongs to the *Farynala* complex and is related to the genus *Warodia* but can be distinguished from the latter genus by 1) pygofer side without posterior marginal ledge; 2) pygofer side with one microseta subbasally near ventral margin; 3) caudal part of paramere shorter than the latter; and 4) apex of subgenital plate curved and expanded with short stout setae.

Description.—Uniformly yellowish white. Head wider than pronotum; vertex rounded to face, fore and hind margins subparallel; coronal suture distinct, extending to near anterior margin. Forewing with first apical cell small, second apical cell largest, widening towards apex, third apical cell subtriangular, petiolate with stem short. Hind wing with R and M veins confluent apically; apical submarginal vein absent. Abdominal apodemes well developed.

Genital valve long,  $\frac{1}{3}$ – $\frac{1}{2}$  length of subgenital plate. Pygofer long, sides with an inner middle transverse ledge in basal part (Figs. 20, 32) with a rigid microseta near ventral margin subbasally, and some short, rigid microsetae at lower part of posterior margin. Subgenital plate long, narrowing to apex, subtriangular with expanded tip, row of fine microsetae along inner margin and a row of short stout microsetae along outer margin from basal  $\frac{1}{4}$  to apex, a row of sharp peglike microsetae at outer apex and a rigid macroseta subbasally near outer margin. Paramere with elongate basal part, broad middle part, and a very long and stellate caudal part; sensorial pits distinct and scattered in a row from inner middle to subapical outer margin; some fairly long fine setae laterally at midlength. Connective large and lamellate with incomplete poorly-sclerotized central ridge. Aedeagus with basal apodeme well developed, shaft elongate with apical gonopore, pair of elongate apical processes strongly curved laterally to opposite side, crossed basally.

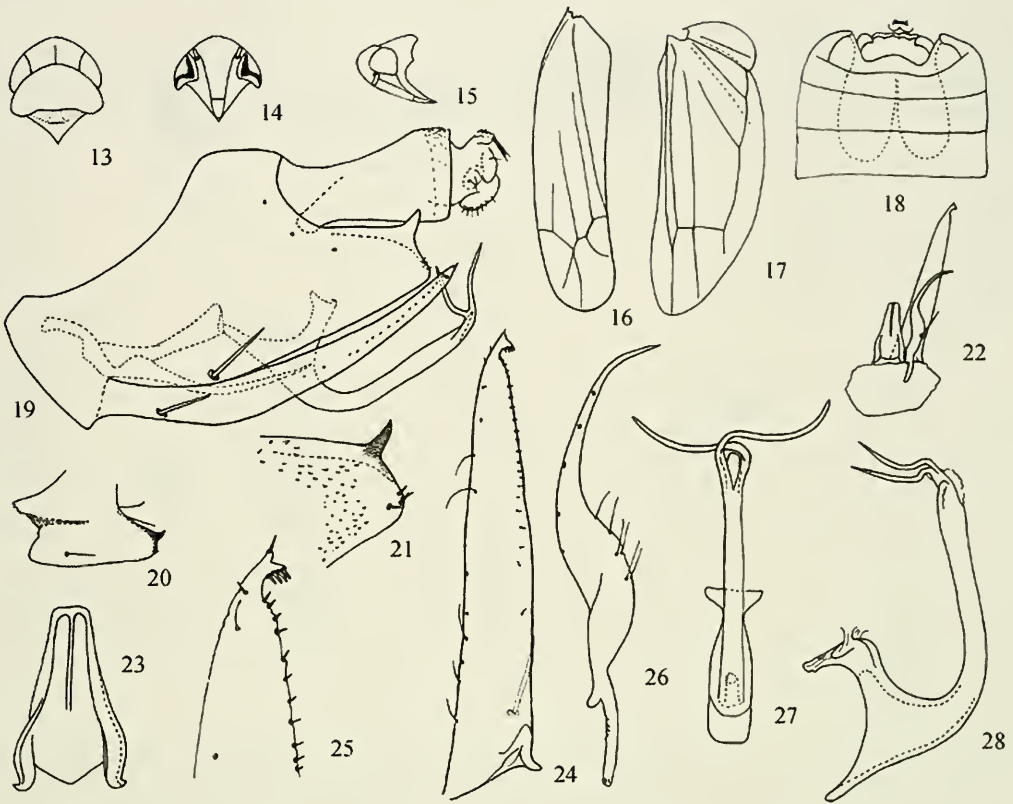
Etymology.—The new genus name is derived from the Latin “*xanion-*” which means comblike and refers to the shape of apical part of subgenital plate. The gender is feminine.

#### *Xaniona galacta* Zhang and Huang, new species (Figs. 13–28)

Diagnosis.—Distinguished from the similar *X. cerina* by 1) pygofer side with an acute process near dorsocaudal angle; and 2) aedeagal shaft with only one pair of process.

Description.—Length: ♂ 3.45 mm; ♀ 3.50 mm. Uniformly yellowish white. Abdominal apodemes strongly rounded apically, reaching to midlength of abdominal sternite V. Genital valve about  $\frac{1}{3}$  length of subgenital plate. Pygofer side with a spinelike process at dorsocaudal angle. Aedeagal shaft in lateral view of similar width throughout length and straight from near base to apex, with pair of elongate apical





Figs. 13–28. *Xaniona galacta*. 13, Head and thorax, dorsal view. 14, Face. 15, Head and pronotum, lateral view. 16, Forewing. 17, hindwing. 18, Abdominal apodemes. 19, Male genital capsule and anal tube, lateral view. 20, Male pygofer side, lateral view. 21, Posterior part of ♂ pygofer side, lateral view. 22, Paramere, connective, subgenital plate and valve, dorsal view. 23, Connective. 24, Subgenital plate, ventral view. 25, Apical part of subgenital plate, ventral view. 26, Paramere. 27, Aedeagus, posterior view. 28, Aedeagus, lateral view.

process, strongly curved laterally to opposite side, crossed basally.

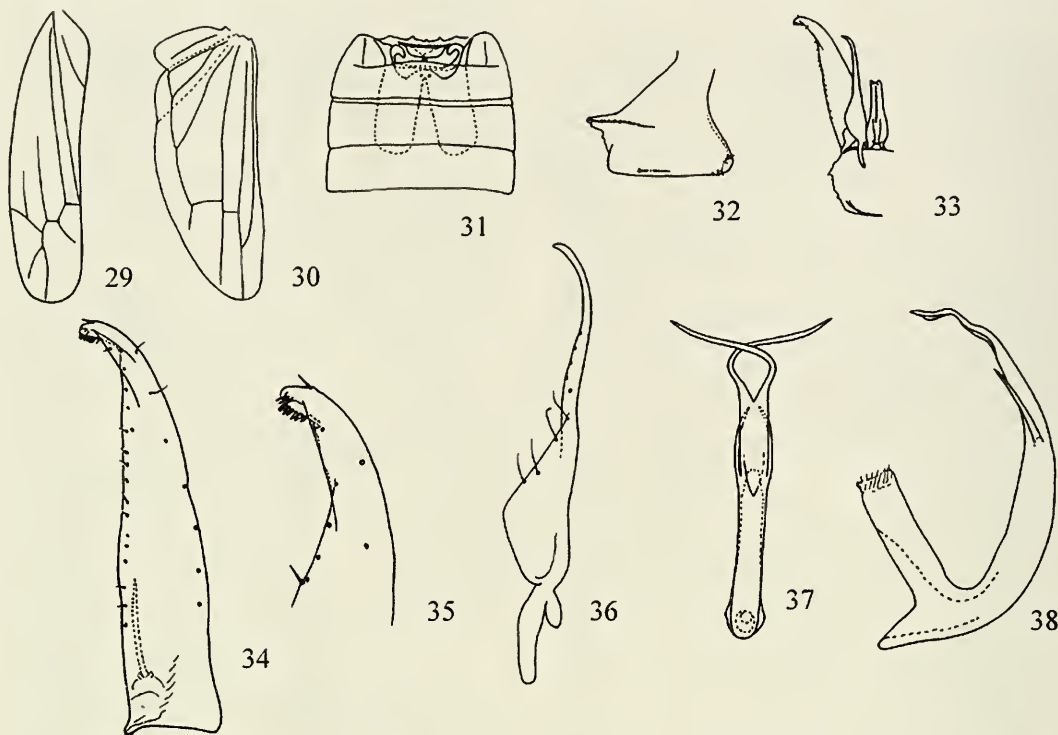
Types.—Holotype: ♂, China, Yingxiu (30.1°N, 101.3°E), Sichuan Province, alt. 1,000 m, Oct. 25, 1999, coll. I. Dworakowska. Paratypes: China, 3 ♂, 2 ♀, Mt. Emei (29.6°N, 103.4°E), Sichuan Province, alt. 600 m, on *Debregeasia*, Nov. 2, 1999, coll. I. Dworakowska; 2 ♂, 1 ♀, Mt. Emei (29.6°N, 103.4°E), Sichuan Province, alt. 600 m, on shrub, Oct. 29, 1999, coll. I. Dworakowska.

Etymology.—The specific name is derived from the Latin “*galact-*” which means milky white referring to its body color.

*Xaniona cerina* Zhang and Huang,  
new species  
(Figs. 29–38)

Diagnosis.—Distinguished from the similar *X. galacta* sp. nov. by 1) pygofer side without a process, and 2) aedeagal shaft with two pairs of processes.

Description.—Length: ♂ 3.45 mm; ♀ 3.60 mm. Body yellowish white. Vertex rounded to face, slightly produced anteriorly. Abdominal apodemes shallowly rounded posteriorly, reaching to 5th abdominal sternite. Genital valve about half length of subgenital plate. Pygofer side without process. Aedeagal shaft in lateral view ta-



Figs. 29–38. *Xaniona cerina*. 29, Forewing. 30, Hindwing. 31, Abdominal apodeme. 32, Male pygofer side, lateral view. 33, Paramere, connective, subgenital plate and valve, dorsal view. 34, Subgenital plate, dorsal view. 35, Apical part of subgenital plate, dorsal view. 36, Paramere. 37, Aedeagus, posterior view. 38, Aedeagus, lateral view.

pered from base to apex, evenly curved dorsally, with a pair of elongate apical processes, strongly curved laterally to other side, crossed basally, and a subapical short straight process on each side, directed dorsally.

Types.—Holotype: ♂, Mt. Emei (29.6°N, 103.4°E), Sichuan Province, alt. 550 m, Nov. 2, 1999, coll. I. Dworakowska. Paratypes: 1 ♂, 1 ♀, alt. 950 m, on *Hortensia*; 2 ♂, 2 ♀, alt. 1,500 m, Oct. 31, 1999, other data same as holotype.

Etymology.—The specific name is derived from the Latin “*cerin-*” which means yellowish white referring to its body color.

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